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Ministry of
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Communications

SURVEY OF LOCAL TELEPHONE PRICING AND USAGE ISSUES AMONG CUSTOMERS IN ONTARIO

VOLUME 1 - RESIDENTIAL

Prepared by

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ONTARIO MINISTRY OF TRANSPORTATION AND COMMUNICATIONS

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EXECUTIVE SUMMARY

Local telephone service in Ontario has traditionally been priced on the basis of a flat rate per month. Bell Canada has proposed two significant changes to the pricing of local service. First, Bell has proposed to the CRTC that rate rebalancing be undertaken so that local rates are increased and long distance rates are decreased. Second, Bell Canada is extensively studying local measured service (LMS) which would move local rate structures away from a flat rate basis to a usage sensitive basis (similar to long distance rates). There is currently a lack of information on the effects of LMS and rate rebalancing within Ontario or within Canada.

The research objective of this study was to collect information from residential and small business telephone users in Ontario concerning;

- local and long distance calling patterns;
- attitudes towards local and long distance pricing issues;
- interrelationships between pricing attitudes and calling patterns; and
- interrelationships between pricing attitudes and user characteristics.

This report describes the findings regarding residential customers. A companion report contains the small business customer findings.

The data for this study were collected by a mail diary and accompanying questionnaire. The questionnaire was designed to measure telephone pricing attitudes and user characteristics. The diary was designed to

measure outgoing telephone calling patterns. Individuals were surveyed from each of the Ministry's five administrative regions, for a total of 328 respondents. The sample was drawn randomly from telephone books for a set of selected cities in each region. The cities were chosen on the basis of their representativeness of the region and the requirement that each city has Extended Area Service (EAS). Rural and suburban representation was ensured by recruiting individuals who resided in small communities adjacent to the selected cities.

There are seven key findings:

- Residential respondents make an average of 21.5 local calls and 1.4 long distance calls each week, primarily to friends and relatives.

- Most residential respondents are strongly opposed to the rate rebalancing proposal presented in this study, generally because few respondents perceive any benefits to them in rate rebalancing.

- Respondents are also opposed to either local measured service or local measured service with rate rebalancing.

- Respondents who make a high number of local calls tended to prefer flat rate service while respondents who make a low number of local calls tended to prefer local measured service.

- Respondents who make a low number of long distance calls tended to oppose the reduced long distance rates and higher local service charges under rate rebalancing while respondents who make a high number of long distance calls tended to prefer rate rebalancing.

- Households where someone is confined indicated a greater difficulty in affording rate rebalancing.

- Low income households reported greater likelihood of discontinuing telephone service if local measured service with rate rebalancing is introduced.

I. INTRODUCTION

A. BACKGROUND

Local telephone service in Ontario has traditionally been priced on the basis of a flat rate per month for a given exchange size (i.e., rate group) and type of service (i.e., residence, business). Bell Canada has proposed two significant changes to the pricing of local service.

First, Bell has proposed to the CRTC that a form of rate restructuring on which Bell calls "rate rebalancing" be undertaken so that local rates are increased and long distance rates are decreased. The arguments given for rate rebalancing include:

- Local service costs are said to be greater than local service rates.
- Long distance costs are said to be less than long distance rates.
- Competitive pressures in the long distance voice communication market will drive long distance charges toward cost.

Second, Bell Canada is extensively studying local measured service (LMS) which would move local rate structures away from a flat rate basis to a usage sensitive basis (similar to long distance rates). The arguments given for local measured service include:

- the inherent fairness of making customers pay in direct proportion to their local service usage and,
- the ability of LMS to induce customers to modify their local calling patterns by shifting calls to off-peak periods, thereby reducing the required switching capacity of the local network.

In the United States, numerous studies and isolated bits of data collectively point to the probability that the introduction of rate rebalancing and local measured service will have a different impact on business than on residential customers. It is generally felt that rate rebalancing will benefit business customers more than residential customers. Studies on LMS have shown that local service usage in the residential market varies significantly by household size, income, and age of the head of the household. However, the usefulness of this literature is limited by the lack of information on the effects of LMS and rate rebalancing within Ontario or within Canada.

B. RESEARCH OBJECTIVES

The research objective of this study was to collect information from residential and small business telephone users in Ontario concerning;

- local and long distance calling patterns;
- attitudes towards local and long distance pricing issues;
- interrelationships between pricing attitudes and calling patterns; and
- interrelationships between pricing attitudes and user characteristics.

This report describes the findings regarding residential customers. A companion report contains the small business customer findings.

II. METHODOLOGY

A. OVERVIEW

The data for this study were collected by a mail diary and accompanying questionnaire. The questionnaire was designed to measure telephone pricing attitudes and user characteristics. The diary was designed to measure outgoing telephone calling patterns.

After reviewing the draft diary and questionnaire with Ministry of Transportation and Communications managers, both the diary and questionnaire were pretested. After reviewing the pretest results, a revised questionnaire and diary were developed (Appendix II).

Potential respondents were recruited by telephone and individuals who agreed to participate were mailed the diary and questionnaire. As a recruitment incentive, individuals were given a lottery ticket for participating in the study. Individuals who indicated that they, or other household members, worked for a telephone company or affiliate were excluded from participating in the study. During the recruitment interview, individuals were asked how many telephones they had in their homes so that one diary could be sent for each telephone set.

A quota of 105 individuals was recruited from each of the Ministry's five administrative regions, for a total of 525 individuals. A regional quota was set in order to test for regional differences across the province in the survey results. Based on an estimated response rate of 60%, it was expected that the completed sample size would be 315 or 63 individuals in each region. This sample size (315) was chosen in order to achieve a sample accuracy of $\pm 5.5\%$ for the aggregate result and $\pm$ 10% for regional results (based on a binominal distribution for a 50%-50% response proportion at a 95% confidence level).

EXHIBIT 1

CITIES SAMPLED

Region	Central Cities	Adjacent Communities
Eastern	Ottawa	Rockland, Russell
	Kingston	Bath, Gananoque
Central	Metro Toronto	Maple
	Hamilton	Grimsby, Caledonia
Southwestern	London	Lambeth
	Windsor	Amherstberg, Essex
Northeastern	Sudbury	Lively, Whitefish, Chelmsford, Blezard Valley
	North Bay	Bonfield, Redbridge, Dokis
	Timmins	New Liskeard, Haileybury
Northwestern	Sault Ste. Marie	Echo Bay, Goulais
	Thunder Bay	Murillo

EXHIBIT 2

SAMPLE STRUCTURE BY TYPE OF SAMPLE

Completed Sample	328
Total Mailouts	525
Response Rate	62%

The sample was drawn randomly from telephone books for a set of selected cities in each region. The cities were chosen on the basis of their representativeness of the region and the requirement that each city has Extended Area Service (EAS). Only respondents who lived in communities with EAS were selected because local measured service will have the greatest impact in areas with EAS. Rural and suburban representation was ensured by recruiting individuals who resided in small communities adjacent to the selected cities. Exhibit 1, opposite, contains the list of cities from which individuals were recruited, broken down by region and type of city (i.e., central or adjacent).

Respondents were mailed the diary and questionnaire in one outer envelope which contained one dairy for each telephone set the respondent owns. The questionnaire was enclosed in an inner envelope with instructions that the diary was to be completed before the questionnaire envelope was opened. This was done in order to avoid having the questionnaire bias the diary. The diary itself required the respondent and everyone else in the household to record all outgoing calls made from their residence during the week of Thursday, May 2 to Wednesday, May 8, 1985. For each outgoing call, the time and day of the call, length, person called and type of call (i.e., local or long distance) was recorded. All respondents received reminder telephone calls to complete and return the diary and questionnaire.

The questionnaire was answered after the diary was completed and respondents were encouraged to look at their completed diary while answering the questionnaire. This was done to ensure that respondents were fully aware of their telephone usage when they completed the questionnaire which provided respondents with the current basic local service rate in their area, excluding set rental and Touch Tone service. This was done to ensure that respondents were aware of the telephone service charges in their area as they completed the questionnaire.

EXHIBIT 3

SAMPLE STRUCTURE BY REGION

Region	
SAMPLE SIZE	328
Southwest	21%
Central	16
Eastern	19
Northeast	19
Northwest	25

EXHIBIT 4

SAMPLE STRUCTURE BY COMMUNITY SIZE

Community Size	
SAMPLE SIZE	328
Urban	64%
Rural, Small Community	36

B. SAMPLE STRUCTURE

A total of 328 usable diaries and questionnaires was received, representing a 62% response rate (Exhibit 2, opposite previous page). Exhibit 3, opposite, provides a breakdown of the sample structure by the Ministry's administrative regions. Due to varying response rates in each region, 16% of the sample comprised respondents residing in the Central region, compared with a planned 20%. Conversely, 25% of the sample came from the Northwest region. These variations were relatively minor and did not reflect major regional differences in response rates.

A breakdown of the sample structure by community size is provided in Exhibit 4 on the opposite page. The majority of respondents (64%) live in urban or central city locations. Only 36% of the respondents in the sample live in the rural or small communities adjacent to central cities. It must be stressed, however, that all rural and small community respondents had extended area service to the larger, adjacent communities.

C. RESPONDENT CHARACTERISTICS

The average size of respondents' households was 3.0, with an average of 1.4 males and 1.6 females (Table 1, Appendix 1). This indicates that the size of respondents' households was slightly larger than the provincial average of approximately 2.3 (based on 1981 Census).

In terms of household education levels, 34% of male heads of household and 30% of female heads of household had some post secondary education (Table 2, Appendix I). The 1981 Census indicates that 35% of male heads of household and 28% of female heads of households had some post secondary education. Therefore, the sample very accurately reflects the provincial education distribution.

EXHIBIT 5

NUMBER OF DAILY OUTGOING LOCAL CALLS

BY DAY OF WEEK

SAMPLE SIZE	324
Monday	3.4
Tuesday	3.4
Wednesday	3.3
Thursday	3.4
Friday	3.2
Saturday	2.7
Sunday	2.5
Total Week	21.5

EXHIBIT 6

NUMBER OF WEEKLY OUTGOING LOCAL CALLS

BY TIME OF DAY

SAMPLE SIZE	324
8:00 a.m.-9:00 p.m.	18.6
9:00 p.m.-11:00 a.m.	2.4
11:00 p.m.-8:00 a.m.	0.8
Total Week	21.8

Table 3, (Appendix I) presents an occupational breakdown of the male and female heads of household in the sample. The largest occupational category for males was skilled worker (34%) followed by professional (27%). The largest occupational category for females was housewife (34%) followed by professional (18%). In the sample, 77% of male and 36% of female heads of household were employed full-time (Table 4, Appendix I). Comparisons of occupational levels and employment status to Census results cannot be done due to differences in how the variables are defined.

As noted earlier, all respondents had Extended Area Service to adjacent communities. The majority of households (68%) in the sample did not have touchtone service (Table 5, Appendix I).

Overall, these results indicate that the sample was quite representative of the Ontario population in terms of respondent characteristics.

D. SAMPLE ACCURACY

The next four sections present the key findings of the study. All results are presented on an aggregate, provincial basis without regional breakdowns. Regional analyses were undertaken, but no significant differences at a 95% confidence level were found in any of the results. Consequently, only aggregate results are presented in this report and the sample should be considered representative of the province as a whole, despite the regional quota sampling plan which was used.

In interpreting the study results, it must be stressed that the results are only accurate within a specified level of accuracy, due to sampling fluctuations. That is, had a different sample of respondents been drawn, sampling fluctuations might have yielded slightly different results. Appendix III contains the accuracy

EXHIBIT 7

NUMBER OF WEEKLY OUTGOING LOCAL CALLS BY PERSON CALLED

Person Called	
SAMPLE SIZE	325
Friends and Relatives	15.8
Businesses	3.3
Professionals	1.4
Emergencies	.1
Other	1.2
Total Week	21.8

EXHIBIT 8

NUMBER OF WEEKLY OUTGOING LONG DISTANCE CALLS BY DAY OF WEEK

	Residential
SAMPLE SIZE	328
Weekdays	0.8
Weekends	0.6
Total Week	1.4

levels for binary responses (i.e., yes/no answers) for various response proportions at a 95% confidence level. Details concerning the use of this appendix are contained in the appendix itself.

III. LOCAL AND LONG DISTANCE CALLING PATTERNS

A. LOCAL CALLING PATTERNS

Residential respondents made an average of 21.5 outgoing local calls from their homes during the week that was surveyed (Exhibit 5, opposite previous page). The daily average of calls was 3.4 during the week and 2.6 during the weekend.

During the week that was surveyed, respondents made most of their outgoing local calls between 8:00 a.m. to 9:00 p.m. (18.6 calls), followed by 9:00 p.m. to 11:00 p.m. (2.4 calls) and 11:00 p.m. to 8:00 a.m. (0.8 calls) (Exhibit 6, opposite previous page).

Most of the weekly outgoing local calls made by residential respondents were made to friends and relatives (15.8 calls), followed by calls to businesses (3.3 calls), and professionals (1.4 calls) (Exhibit 7, opposite). As expected, very few calls are made for emergency purposes during the week (0.1 calls).

B. LONG DISTANCE CALLING PATTERNS

Residential respondents made considerably fewer long distance calls than local calls during the week. On average, a total of 1.4 long distance calls were made during the week surveyed, comprised of 0.8 long distance calls made during week days and 0.6 long distance calls made during the weekend (Exhibit 8, opposite).

EXHIBIT 9

NUMBER OF WEEKLY OUTGOING LONG DISTANCE CALLS BY PERSONAL CALLED

Person Called	
SAMPLE SIZE	322
Friends and Relatives	1.00
Businesses	0.28
Professionals	0.05
Emergencies	0.00
Other	0.07
Total Week	1.40

EXHIBIT 10

RATE RE BALANCING ATTITUDES

SAMPLE SIZE	311	
Strongly in Favour	7%	
Somewhat in Favour	13	
Somewhat Opposed	14	80
Strongly Opposed	66	

Like most local calls, most long distance calls made each week by residential respondents were made to friends and relatives (1.0 calls) (Exhibit 9, opposite). Interestingly, a substantial number of long distance calls were made to businesses each week (0.28 calls).

C. SUMMARY

In terms of calling patterns, residential respondents made an average of 21.5 local calls and 1.4 long distance calls each week. Most local and long distance calls are made to friends and relatives. The majority of local and long distance calls are made during the week rather than on weekends.

IV. TELEPHONE PRICING ATTITUDES

A. RATE REBALANCING

Respondents were asked whether they were in favour or opposed to a rate rebalancing plan. Under this plan their existing local rates would be doubled and their long distance rates would be reduced by 50%.

The vast majority of residential respondents were either strongly opposed (66%) or somewhat opposed (14%) to rate rebalancing (Exhibit 10, opposite). These results indicate that respondents have very strong opinions concerning their opposition to the rate rebalancing plan which was presented to them.

Despite the 50% reduction in long distance rates in the rebalancing plan, very few residential respondents indicated that they would make more long distance calls. The majority of respondents (63%), indicated that they would not change the number of long distance calls which they would make (Exhibit 11, opposite next page).

EXHIBIT 11

CHANGE IN LONG DISTANCE CALLING

DUE TO REBALANCING

SAMPLE SIZE	323
Twice as Many Calls or More	2%
A Lot More	3
Somewhat More	10
A Few More	22
No Change	63

EXHIBIT 12

AFFORDABILITY OF RATE REBALANCING

SAMPLE SIZE	266	
Very Easy to Afford	3%	
Easy to Afford	35	
Difficult to Afford	49	62
Very Difficult to Afford	13	

The strong opposition to rate rebalancing may be due to the fact that about two-thirds (62%) of respondents indicated that they would have difficulty affording rebalanced telephone rates (Exhibit 12, opposite). Of these respondents, 14% indicated that they would be somewhat likely to discontinue their telephone service and 16% would be very likely to discontinue their service (Exhibit 13, opposite next page). It is unlikely that all of these respondents would, in fact, discontinue their service. Assuming that 30% of those who answered that they would be "somewhat likely" to discontinue service and 90% of those who said they would be "very likely" to discontinue their service, in fact do so, an estimated 11.5% of respondents would discontinue their telephone service with this rebalancing plan.

B. LOCAL MEASURED SERVICE

Respondents were asked whether they would prefer a flat rate which was $3.00 per month higher than their current flat rate, or a local measured service rate with the following elements:

- Reduced monthly minimum charge equal to $1 less than their current flat rate; and
- 2¢ charge for first minute of each outgoing local call; and
- Additional minute charges of 1¢ for calls made during the week between 8 a.m. and 9 p.m., 2/3¢ for calls made between 9 p.m. and 11 p.m. during the week, and 1/3¢ for calls made at all other times.

The local measured service plan was partly based on a composite of local measured service rates and structures used in various American state jurisdictions. The time boundaries for peak and off-peak rates were obtained from a scenario presented by Bell Canada in

EXHIBIT 13

LIKELIHOOD OF DISCONTINUING SERVICE

IF RATE REBALANCING OCCURRED

SAMPLE SIZE	194[1]
Very Likely	16%
Somewhat Likely	14
Somewhat Unlikely	27
Very Unlikely	43

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[1] Asked only of those respondents who indicated some difficulty in affording rate rebalancing.

Local Telephone Service Pricing: Is There A Better Way? ("LMS Rating Considerations", John A. Elliot, pg 53 to 59, Proceedings of a conference held in Montreal, Quebec, May 2 to May 4, 1984). These rates are not to be understood as necessarily predicted or advocated.

Despite the increased flat rate charge, most respondents (63%) still preferred the flat rate plan (Table 6, Appendix I).

In order to assess attitudes towards flat rate versus local measured service pricing in a rate rebalanced environment, respondents were also asked to indicate whether they preferred a second flat rate or a second local measured service rate. Both rates, however, allowed for a 50% reduction in long distance rates. The second flat rate was equal to twice their current flat rate plus an additional $6.00. The combined local measured service rate contained the following elements:

- Increased monthly minimum charge of twice the respondent's current flat rate less $2.00, plus
- 4¢ charge for the first minute of each outgoing local call, and
- additional minute charges of 2¢ for calls made during the week between 8:00 a.m. and 9:00 p.m., 1 1/3¢ for calls made between 9:00 p.m. and 11 p.m. during the week and 2/3¢ for calls made at other times.

Given a choice between these two rate proposals, 20% preferred the second flat rate, 40% preferred the local measured service rate and 34% indicated that they would discontinue their telephone service (Table 6, Appendix I).

Respondents were asked why they preferred the flat rate plans to either the local measured service rate or the local measured service rate with rate rebalancing. The flat rate plan was preferred to the

EXHIBIT 14

TIME SHIFTING DUE TO LMS

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	293	299
Yes, Would Shift	46%	54%
No, Wouldn't Shift	54	46

local measured service rate either because the flat rate was perceived to be less expensive (50%) or because the flat rate allowed the subscriber to know how much the telephone charges would be each month (43%) (Table 7, Appendix I). Similarly, preference for the second flat rate plan, compared to the local measured service rate with rate rebalancing, was based on a perception that the second flat rate plan was less expensive (60%) or because the subscriber would know how much the telephone charges would be each month (28%) (Table 7, Appendix I).

Preference for the local measured service plan was cross-tabulated, with preference for the local measure service with rate rebalancing plan in order to assess consistency of preferences. Among respondents who preferred local measured service with rate balancing, 63% also preferred local measured service without rate rebalancing (Table 8, Appendix I). Conversely, among respondents who preferred the second flat rate plan to local measured service with rate rebalancing, 81% preferred the first flat rate plan to local measured service without rate rebalancing. Finally, among those who indicated that they would discontinue their service if local measured service with rate rebalancing were introduced, 62% preferred the first flat rate plan.

Respondents were asked to estimate how many fewer local telephone calls they would make if either the local measured service rate or the local measured service rate with rate rebalancing were introduced and made mandatory. Under a local measured service rate, 73% indicated that they would not make any fewer calls each day (Table 9, Appendix I). With a local measured service rate with rate rebalancing, the majority of respondents(58%) still indicated that they would not make any fewer local calls.

Respondents were also asked if they would shift their local calling to other time periods if the local measured service or local

EXHIBIT 15

CHANGE IN LOCAL CALL LENGTH WITH LMS

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	307	301
A Lot Shorter	25%	33%
Somewhat Shorter	36 (61)	36 (69)
No Change	38	31
Somewhat Longer	1	0
A Lot Longer	0	0

EXHIBIT 16

CHANGE IN VOLUNTEER CALLING

	LMS Only	LMS AND Rebalancing
SAMPLE SIZE	64[1]	64[1]
A Lot More Calls	0%	1%
A Few More Calls	1	1
No Change	45	44
A Few Less Calls	16	22
A Lot Less Calls	38 (54)	32 (54)

[1] Asked only of the 20% of respondents who used the telephone for volunteer purposes.

measured service/rate rebalancing plans were introduced. A large number of respondents indicated that they would shift the time of their local calling under either local measured service (46%) or local measured service/rate rebalancing (54%) plans (Exhibit 14, opposite previous page). Those respondents who indicated that they would switch their local calling to other time periods were asked how many calls they would switch each day. The median number of local calls which would be switched under either the local measured service or local measured service/rate rebalancing plans is 2.5 (Table 10, Appendix I).

Respondents were also asked whether they would make shorter local calls if either local measured service or local measured service/rate rebalancing were introduced. A majority of respondents indicated that they would make shorter calls if either local measured service (61%) or local measured service/rate rebalancing (69%) were introduced (Exhibit 15, opposite).

Those respondents who indicated that they made volunteer calls from their homes were asked whether they would make fewer volunteer calls if local measured service or local measured service with rate rebalancing were introduced. A majority of respondents indicated that they would make fewer volunteer calls if either local measured service (54%) or local measured service with rate rebalancing (54%) were introduced (Exhibit 16, opposite).

Respondents were also asked whether they would make more telephone calls from their place of employment if either local measured service or local measured service with rate rebalancing were introduced. Most respondents indicated that they would not make any more telephone calls from their place of employment under either local measured service (79%) or local measured service with rate rebalancing (81%) (Table 11, Appendix I).

C. SUMMARY

There are two major findings concerning telephone pricing attitudes. First, most residential respondents are strongly opposed to the rate balancing proposal presented to them in this survey. One reason for this opposition to rate rebalancing is the perceived lack of benefits of reduced long distance charges since few respondents indicated that they would make more long distance calls if the rates were reduced. In fact, many respondents indicated that they would have difficulty affording rebalanced rates, some to the extent of discontinuing service. In addition, rate rebalancing may reduce long distance calling as household telephone budgets are reallocated to pay the increased local charge.

Second, respondents are also opposed to either local measured service or local measured service with rate rebalancing for two reasons: respondents believe the flat rate is cheaper and it sets a maximum bill each month. Respondents indicated that they are likely to save on local calling charges by shifting their calling to cheaper time periods and making shorter calls rather than reducing the number of local calls made should LMS or LMS/rate rebalancing be introduced. A substantial number of respondents indicated they would discontinue their service, if LMS/rate rebalancing were introduced. (See Table 6, Appendix I).

V. RELATIONSHIP BETWEEN CALL PATTERNS AND TELEPHONE SERVICE PRICING ATTITUDES

Analysis was undertaken to determine whether the number of calls made by respondents were related to their attitudes concerning telephone service pricing. Significant relationships were identified by applying cross tabulation and analyses of variance techniques with a 95% confidence level.

Preference for rate rebalancing was significantly related to the number of long distance calls made by respondents. Respondents who were strongly in favour of rate rebalancing made significantly more long

distance calls (2.9) each week than respondents who were strongly opposed to rate rebalancing (1.3) (Table 12, Appendix I).

Not surprisingly, the number of outgoing local calls made by respondents was related to their preference for flat rate over local measured service. Respondents who preferred flat rate made significantly more local calls each week (24.4) than respondents who preferred local measured service (15.2) (Table 13, Appendix I). However, no relationship between local calling patterns and preference for local measured service with rate rebalancing could be established (Table 14, Appendix I). However, the sample size may be insufficient to detect such a relationship in this survey.

In summary, there is a positive relationship between the number of long distance calls made by respondents and their preference for rate rebalancing. Respondents who prefer rate rebalancing make more long distance calls than those who oppose rate rebalancing.

In addition, there is a positive relationship between the number of local calls made by respondents and their preference for flat rate over local measured service. Respondents who prefer flat rate service make more local calls than those who prefer local measured service. No relationship between the number of local calls made by respondents and preference for flat rate over local measured service with rate rebalancing could be established.

VI. RELATIONSHIP BETWEEN TELEPHONE SERVICE PRICING ATTITUDES AND RESPONDENT CHARACTERISTICS

The relationship between telephone service pricing attitudes and selected respondent characteristics were examined, using cross tabulation and analyses of variance.

The affordability of rate rebalancing was compared between respondents who live in households in which someone is confined and all other

EXHIBIT 17

RATE REBALANCING AFFORDABILITY BY CONFINEMENT

(RESIDENTIAL SAMPLE)

Affordability	Confined Person In Household		No One Confined In Household	
SAMPLE SIZE	15		248	
Very Ease to Afford	13%		2%	
Easy to Afford	7		37	
Difficult to Afford	73	80	47	61
Very Difficult to Afford	7		14	

($p < .01$)

respondents. Respondents who lived in households in which someone is confined reported greater difficulty (80%) in affording telephone service if rates were rebalanced than those in other households (61%) (Exhibit 17, opposite).

In addition, preference for flat rate or local measured service with rate rebalancing was crosstabulated with household income. Not surprisingly, higher income groups indicated less likelihood of discontinuing service if local measured service with rate rebalancing were introduced than low income groups. Among the twelve (5.5% of sample) households with incomes under $8,000, 50% of those respondents indicated that they would discontinue their service while only 22% of respondents from households with incomes of over $40,000 stated that they would discontinue their service (Table 15, Appendix I).

In summary, telephone service pricing attitudes are related to some respondent characteristics. Households with confined individuals would have greater difficulty affording rate rebalancing. Low income households would be more likely to discontinue telephone service under local measured service with rate rebalancing than high income households.

VII. SUMMARY OF KEY FINDINGS

There are six key findings. First, residential respondents make an average of 21.5 local calls and 1.4 long distance calls each week, primarily to friends and relatives.

Second, most residential respondents are strongly opposed to the rate rebalancing proposal presented in this study, generally because few respondents perceive any benefits to them in rate rebalancing. The long distance cost savings do not exceed the increased local service costs.

Third, respondents are also opposed to either local measured service or local measured service with rate rebalancing. A substantial number of respondents indicated that they would discontinue their service if local measured service with rate rebalancing were introduced.

Fourth, respondents who make a high number of local calls prefer flat rate service to local measured service.

Fifth, respondents who make a low number of long distance calls are opposed to reduced long distance charges and increased local service changes under rate rebalancing.

And sixth, some telephone pricing attitudes are related to respondent characteristics. Households where someone is confined indicated a greater difficulty in affording rate rebalancing. Low income households reported greater likelihood of discontinuing telephone service if local measured service with rate rebalancing is introduced.

APPENDIX I

SUPPLEMENTARY TABLES

TABLE 1

HOUSEHOLD SIZE BY AGE

Age	Males	Females	Total
SAMPLE SIZE			320
6 and Under	.16	.19	.35
7 to 12	.14	.14	.28
13 to 19	.16	.20	.36
20 to 29	.21	.31	.52
30 to 39	.25	.23	.48
40 to 49	.15	.18	.33
50 to 64	.11	.13	.24
Total	1.40	1.60	3.00

TABLE 2

HEAD OF HOUSEHOLD EDUCATIONAL LEVELS

	Male Head		Female Head	
SAMPLE SIZE	254		259	
Grade 8 or Less	15%		8%	
Grade 9 to 12	44		55	
Grade 13	7		7	
Some College/University	13	34	12	30
Completed College/University	21		18	

TABLE 3

HEAD OF HOUSEHOLD OCCUPATIONS

	Male Head	Female Head
SAMPLE SIZE	254	236
Professional	27%	18%
Managerial	9	3
Sales	2	5
Clerical	4	14
Skilled	34	6
Unskilled	8	3
Farmer, Fisherman	1	1
Retired	11	9
Unemployed	2	3
Housewife	1	34
Student	0	3
Other	1	1

TABLE 4

HEAD OF HOUSEHOLD EMPLOYMENT STATUS

	Male Head	Female Head
SAMPLE SIZE	269	266
Full-time Employed	77%	36%
Part-time Employed	4	17
Not Employed	6	35
Retired	13	12

TABLE 5

TOUCHTONE SERVICE

SAMPLE SIZE	315
Have Touchtone Service	32%
Don't Have Touchtone Service	68

TABLE 6

LMS PREFERENCES

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	246	239
Prefer Flat Rate	63%	26%
Prefer LMS	37	NA
Prefer LMS & Rebalancing	NA	40
Discontinue Service	NA	34

NA - Not Asked

TABLE 7

REASONS FOR PREFERRING FLAT RATE

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	142	58
Flat Rate Cheaper	50%	60%
Know Amount Each Month	43	28
Both	1	2
Other	6	10

TABLE 8

RELATIONSHIP BETWEEN LMS PREFERENCE

AND LMS WITH RATE REBALANCING PREFERENCE

		LMS WITH RATE REBALANCING PREFERENCE		
		Flat Rate	LMS with Rebalancing	Discontinue Service
SAMPLE SIZE		57	80	55
LMS Preference	Flat Rate	81%[1]	37%	62%
	LMS	19	63	38

($p < .001$)

[1] Indicates that of those respondents who preferred flat rate service instead of LMS with rate rebalancing, 81% also preferred flat rate service to LMS.

TABLE 9

LOCAL CALLING REPRESSION

PER DAY WITH LMS

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	222	229
None	73%	58%
One	4	5
Two	6	9
Three	4	10
Four	2	2
Five or More	11	16
Median	0	0

TABLE 10

NUMBER OF CALLS SWITCHED

TO A CHEAPER TIME EACH DAY WITH LMS

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	84[1]	102[1]
None	9%	10%
One	6	12
Two	20	18
Three	25	22
Four	4	10
Five or More	36	28
Median	2.5	2.5

[1] Asked only of those respondents who indicated some likelihood of switching calling times.

TABLE 11

INCREASE IN PERSONAL CALLS FROM PLACE OF EMPLOYMENT

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	255	257
None	79%	81%
One	5	5
Two	6	5
Three	4	2
Four	0	1
Five or More	6	6

TABLE 12

RELATIONSHIP BETWEEN OUTGOING LONG DISTANCE CALLS AND RATE REBALANCING

Preference	NUMBER OF LONG DISTANCE CALLS (WEEKLY)
SAMPLE SIZE	310
Strongly in Favour	2.9
Somewhat in Favour	1.5
Somewhat Opposed	1.2
Strongly Opposed	1.3
	($p < .01$)

TABLE 13

RELATIONSHIP BETWEEN OUTGOING LOCAL CALLS AND LMS PREFERENCE

Preference	Number of Local Calls (Weekly)
SAMPLE SIZE	242
Flat Rate	24.4
LMS	15.2
	($p < .01$)

TABLE 14

RELATIONSHIP BETWEEN OUTGOING LOCAL CALLS AND LMS/RATE REBALANCING PREFERENCE

Preference	Number of Local Calls (Weekly)
SAMPLE SIZE	228
Flat Rate	24.8
LMS Rebalancing	19.4
Discontinue Service	20.1
	(N.S.)

N.S. - Not Significant at 95% confidence level. This indicates that the differences in the number of local calls among the three groups may be due to sampling flucuations.

TABLE 15

LMS/RATE REBALANCING BY HOUSEHOLD INCOME

LMS/REBALANCING PREFERENCE	$8,000	$8,000 to $16,000	$16,000 to $24,000	$24,000 to $32,000	$32,000 to $40,000	Over $40,000
SAMPLE SIZE	12	46	32	35	37	58
Flat Rate	8%	17%	28%	23%	27%	38%
LMS/Rebalancing	42	35	18	54	57	40
Discontinue Service	50	48	53	23	16	22

APPENDIX II

THE QUESTIONNAIRE AND DIARY

(Example of Questionnaire and Diary
Used for Respondents Residing in Bell Canada
Rate Group 7, i.e. North Bay)

TELEPHONE STUDY
RESIDENCE QUESTIONNAIRE

(MAY, 1985)

PLEASE COMPLETE AND RETURN TO:

DEMAND Research Consultants
99 Bank Street, Suite 727
Ottawa, Ontario
K1P 6B9

Demand Research
99 Bank Street, Suite 727
Ottawa, Ontario
K1P 6B9
(613) 235-1468

Card #: 1 1

Resp #: _ _ _ _ 2-5

Project #: 2 0 2 1 1 9 6-11

Version 1 0 7 12-14

TELEPHONE STUDY

RESIDENCE QUESTIONNAIRE

We have designed this questionnaire so that a minimum amount of effort on your part is required to complete it.

In some cases, you will answer by circling a number on the scale provided. In other cases, we will ask you to write in your answer.

To guide you through the questionnaire, each question is followed by its own set of instructions.

We would like you to answer a few questions about some possible changes to your telephone rates. If you wish, you may look at your weekly record of calls when you answer these questions.

For your information, the current basic local service rate in your area, excluding telephone set rental and TouchTone service charges is $7.55 per month.

A local call is a call where there is no long distance charge.

1. Would you be in favour or opposed to a doubling of your basic local service telephone rate to $15.10 each month if long distance rates in general were reduced by 50%? **CIRCLE ONE NUMBER.**

Strongly in favour	1	
Somewhat in favour	2	
Somewhat opposed	3	15
Strongly opposed	4	
Undecided	8	

2. If these changes took place in your telephone rates, please indicate whether the number of long distance calls that you make each month would increase. **CIRCLE ONE NUMBER.**

Would make twice as many or more long distance calls	1
Would make a lot more long distance calls	2
Would make somewhat more long distance calls	3
Would make a few more long distance calls	4
No change in long distance calls	5
Undecided	8

_ 16

3. And, would these changes make your telephone rates easy or difficult to afford? **CIRCLE ONE NUMBER.**

Very easy to afford	1	**SKIP QUESTION 4**
Easy to afford	2	
Difficult to afford	3	
Very difficult to afford	4	
Undecided	8	

_ 17

4. If these changes took place in your telephone rates, how likely would you be to discontinue your telephone service? **CIRCLE ONE NUMBER.**

Very likely	1
Somewhat likely	2
Somewhat unlikely	3
Very unlikely	4
Undecided	8

_ 18

your basic local service telephone rate is currently based on a flat rate where you can make an unlimited number of local calls for a flat charge.

One alternative to a local flat rate is a local measured rate where there would be a minimum monthly charge of $6.55 plus a usage charge of:

For the first minute of each <u>outgoing</u> local call: 2¢

For each additional minute:

- for calls made Mon - Fri from 8 am to 9 pm: 1¢ — 9 19
- for calls made Mon - Fri from 9 pm to 11 pm: 2/3¢
- for calls made during all other times: 1/3¢

5. If your current local flat rate was increased by $3 to $10.55 each month, would you prefer the new higher local flat rate or the local measured rate? (Please feel free to look at your record of telephone calls when answering this question if you wish.) **CIRCLE ONE NUMBER.**

Prefer new flat rate	1	
Prefer local measured rate	2	SKIP QUESTION 6 — _ 20
Undecided	8	

6. What is the main reason for preferring the new local flat rate instead of the local measured rate? **CIRCLE ONE NUMBER.**

New local flat rate would cost you less than the local measured rate	1
You would know how much your bill would be each month	2
Other (specify) _____	3 — _ 21

_____

7. If the local measured rate was introduced in your area and you were charged the local measured rate, how many fewer local calls, if any, would you make each day? **CIRCLE ONE NUMBER.**

No change	0	
One	1	
Two	2	
Three	3	_ 22
Four	4	
Five or more	5	
Not sure	8	

8. And, if your were charged the local measured rate, would you change the times when you make some of your local calls in order to save money? **CIRCLE ONE NUMBER.**

Yes	1	
No	2	SKIP QUESTION 9
Undecided	8	_ 23

9. How many calls in the average day would you switch to a cheaper time period, in order to save money? **CIRCLE ONE NUMBER.**

None	0	
One	1	
Two	2	
Three	3	_ 24
Four	4	
Five or more	5	
Not sure	8	

10. If you were charged the local measured rate, how would the length of your average local call change? Would it be .... **CIRCLE ONE NUMBER.**

A lot shorter	1	
Somewhat shorter	2	
No change	3	
Somewhat longer	4	_ 25
A lot longer	5	
Undecided	8	

11. And, if you were charged the local measured rate, how many more personal calls, if any, would you make from your place of employment each day? **CIRCLE ONE NUMBER.** 9 26

None	0	
One	1	
Two	2	
Three	3	
Four	4	_ 27
Five or more	5	
Undecided	8	

12. Do you or anyone else in your household make telephone calls for volunteer agencies and charities (such as Scouts, Girl Guides, Hockey teams and the Red Cross) from your household telephone? **CIRCLE ONE NUMBER.**

Yes	1	
No	2 **SKIP QUESTION 13**	_ 28

13. If your were charged for your telephone service under the local measured service rate, please indicate whether the number of calls that your household makes for volunteer agencies and charities each month would change. **CIRCLE ONE NUMBER.**

Would make a lot more volunteer calls	1
Would make a few more volunteer calls	2
No change on volunteer calls	3
Would make a few less volunteer calls	4
Would make a lot less volunteer calls	5
Undecided	8

Another alternative to a local flat rate is a second local measured rate where there would be a minimum monthly charge of $13.10 plus a usage charge of:

For the first minute of each <u>outgoing</u> local call: 4¢

For each additional minute:

- for calls made Mon - Fri, from 8 am to 9 pm 2¢
- for calls made Mon - Fri, from 9 pm to 11 pm 1 1/3¢
- for calls made during all other times 2/3¢

In addition, long distance rates in general would be reduced by 50%.

14. If your current local flat rate was increased by $13.55 to $21.10 each month, with a 50% reduction in long distance rates, would you prefer the new higher local flat rate or this second local measured rate or would you discontinue your telephone service? (Please feel free to look at your record of telephone calls when answering this question if you wish). **CIRCLE ONE NUMBER.**

Prefer new flat rate	1	
Prefer local measured rate	2	
Discontinue telephone service	3	**SKIP QUESTION 15**
Undecided	8	

15. What is the main reason for preferring the new local flat rate instead of this local measured rate? **CIRCLE ONE NUMBER.**

New local flat rate would cost you less than the local measured rate	1	
You would know how much your bill would be each month	2	
Other (specify) _____	3	_ 31

_____

16. If this local measured rate was introduced in your area and you were charged this local measured rate, how many <u>fewer</u> local calls, if any, would you make each day? **CIRCLE ONE NUMBER.**

No change	0	
One	1	
Two	2	
Three	3	
Four	4	_ 32
Five or more	5	
Not sure	8	

17. And, if you were charged this local measured rate, would you change the times when you make some of your local calls in order to save money? **CIRCLE ONE NUMBER.**

Yes	1	
No	2	SKIP QUESTION 18
Undecided	8	_ 33

18. How many calls in the average day would you switch to a cheaper time period in order to save money? **CIRCLE ONE NUMBER.**

None	0
One	1
Two	2
Three	3
Four	4
Five or more	5
Not sure	8

19. If you were charged this local measured rate, how would the length of your average local call change? Would it be .... **CIRCLE ONE NUMBER.**

A lot shorter	1
Somewhat shorter	2
No change	3
Somewhat longer	4
A lot longer	5
Undecided	8

20. And, if you were charged this local measured rate, how many more personal calls, if any, would you make from your place of employment each day? **CIRCLE ONE NUMBER.**

None	0
One	1
Two	2
Three	3
Four	4
Five or more	5
Undecided	8

IF HOUSEHOLD TELEPHONE IS NOT USED FOR VOLUNTEER OR CHARITY CALLS, GO TO QUESTION 22.

21. If you were charged for your telephone service under this local measured service rate, please indicate whether the number of calls that your household makes for volunteer agencies and charities each month would change. **CIRCLE ONE NUMBER.**

Would make a lot more volunteer calls	1	_ 38
Would make a few more volunteer calls	2	9 9 39-40
No change on volunteer calls	3	9 9 41-42
Would make a few less volunteer calls	4	9 43
Would make a lot less volunteer calls	5	9 44
Undecided	8	9 45
		9 46

Finally, a few questions to help us classify your answers along with everyone else who has taken part in the survey. 9 9 47-48

IF NO MALE HEAD OF HOUSEHOLD, GO TO QUESTION 25. 9 9 9 49-51

22. What is the occupation of the male head of the household? **PLEASE BE SPECIFIC AND PRINT YOUR ANSWER CLEARLY.** 9 52

9 53

54-55

---

23. Is he employed full-time, part-time, retired or not employed? **CIRCLE ONE NUMBER ONLY.**

Full-time	1	
Part-time	2	
Retired	3	_ 56
Not employed	4	

24. Which of the following describes the last year of schooling that the male head of your household completed? **CIRCLE ONE NUMBER ONLY.**

Grade 8 or less	1
Grades 9, 10, 11 or 12	2
Grade 13	3
Some College/University	4
Completed College/University	5

_ 57

IF NO FEMALE HEAD OF HOUSEHOLD, GO TO QUESTION 28

25. And, what is the occupation of the female head of the household? **PLEASE BE SPECIFIC AND PRINT YOUR ANSWER CLEARLY.**

_____ 58-59

26. Is she employed full-time, part-time, retired or not employed? **CIRCLE ONE NUMBER ONLY.**

Full-time	1
Part-time	2
Retired	3
Not Employed	4

_ 60

27. And what is the last year of schooling of the female head of the household? **CIRCLE ONE NUMBER ONLY.**

Grade 8 or less	1
Grades 9, 10, 11 or 12	2
Grade 13	3
Some College/University	4
Completed College/University	5

_ 61

28. How many males and females in your household fall into each of the following age groups? **RECORD NUMBER BELOW**

	Males	Females	
Under 7 years of age	____	____	62-63
7 - 12	____	____	64-65
13 - 19	____	____	66-67
20 - 29	____	____	68-69
30 - 39	____	____	70-71
40 - 49	____	____	72-73
50 - 64	____	____	74-75
65 and over	____	____	76-77

29. Is anyone in your household largely confined to the house because of old age or a disability? **CIRCLE ONE NUMBER.**

Yes	1	
No	2	_ 78

30. Into which of the following groups does the total annual income of your household fall? **CIRCLE ONE NUMBER ONLY.**

Under $8,000	1	
$8,000 - $16,000	2	
$16,000 - $24,000	3	
$24,000 - $32,000	4	_ 79
$32,000 - $40,000	5	
Over $40,000	6	

31. Finally, do you have TouchTone telephone service? **CIRCLE ONE NUMBER.**

Yes	1	
No	2	_ 80
Don't know	8	

THANK YOU VERY MUCH. PLEASE MAIL THIS QUESTIONNAIRE AND YOUR WEEKLY RECORD OF CALLS IN THE ENVELOPE PROVIDED

INSTRUCTIONS

For each outgoing call that you or anyone else in your household makes, please indicate the first three digits of the number called (not the area code) and indicate:

1. Time of day - 8 a.m. - 9 p.m., or
   9 p.m. - 11 p.m., or
   11 p.m. - 8 a.m.

2. Length of call in minutes

3. Person called - friends, relatives, or
   professionals (i.e. doctor, dentist, etc.), or
   emergency services (i.e. hospitals), or
   business services (i.e. plumber, stores, etc. including your own place of work), or
   other (i.e. none of the above)

4. Type of call - local, or
   long distance.

PLEASE BE SURE TO DO THIS AS EACH CALL OCCURS THROUGHOUT EACH DAY FOR THE NEXT SEVEN DAYS

If you have more than one telephone, leave one copy of this booklet beside each telephone.

Please remind everyone in your household who uses the telephone to record their calls when they make them.

Do not record calls that are not completed, that is, if there is no answer or you get a busy signal.

Please record your telephone number here: _____

Please record your community here: _____

OUTGOING CALLS

INSTRUCTIONS

USE THIS PAGE FOR ALL CALLS MADE ON THURSDAY, MAY 2, 1985

For each outgoing completed call that is made, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: FRIENDS, FAMILY	PROFESSIONAL SERVICES	EMERGENCY	BUSINESS SERVICES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
21. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
22. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
23. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
24. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
25. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
26. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
27. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
28. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
29. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
30. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
31. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
32. _ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

OUTGOING CALLS

INSTRUCTIONS

USE THIS PAGE FOR ALL CALLS MADE ON FRIDAY, MAY 3, 1985

For each outgoing completed call that is made, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: FRIENDS, FAMILY	PROFESSIONAL SERVICES	EMERGENCY	BUSINESS SERVICES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
21. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
22. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
23. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
24. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
25. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
26. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
27. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
28. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
29. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
30. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
31. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
32. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

OUTGOING CALLS

INSTRUCTIONS

USE THIS PAGE FOR ALL CALLS MADE ON SATURDAY, MAY 4, 1985

For each outgoing completed call that is made, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: FRIENDS, FAMILY	PROFESSIONAL SERVICES	EMERGENCY	BUSINESS SERVICES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
21. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
22. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
23. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
24. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
25. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
26. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
27. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
28. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
29. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
30. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
31. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
32. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

OUTGOING CALLS

INSTRUCTIONS

USE THIS PAGE FOR ALL CALLS MADE ON SUNDAY, MAY 5, 1985

For each outgoing completed call that is made, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

	Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: FRIENDS, FAMILY	PROFESSIONAL SERVICES	EMERGENCY	BUSINESS SERVICES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
21.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
22.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
23.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
24.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
25.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
26.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
27.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
28.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
29.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
30.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
31.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
32.	_ _ _	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

OUTGOING CALLS

INSTRUCTIONS

USE THIS PAGE FOR ALL CALLS MADE ON MONDAY, MAY 6, 1985

For each outgoing completed call that is made, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: FRIENDS, FAMILY	PROFESSIONAL SERVICES	EMERGENCY	BUSINESS SERVICES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
21. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
22. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
23. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
24. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
25. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
26. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
27. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
28. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
29. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
30. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
31. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
32. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

OUTGOING CALLS

INSTRUCTIONS

USE THIS PAGE FOR ALL CALLS MADE ON TUESDAY, MAY 7, 1985

For each outgoing completed call that is made, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	TIME OF DAY: 9 PM To 11 PM	TIME OF DAY: 11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: FRIENDS, FAMILY	PERSON CALLED: PROFESSIONAL SERVICES	PERSON CALLED: EMERGENCY	PERSON CALLED: BUSINESS SERVICES	PERSON CALLED: OTHER	TYPE OF CALL: LOCAL	TYPE OF CALL: LONG DISTANCE
1. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
21. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
22. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
23. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
24. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
25. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
26. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
27. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
28. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
29. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
30. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
31. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
32. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

OUTGOING CALLS

INSTRUCTIONS

USE THIS PAGE FOR ALL CALLS MADE ON WEDNESDAY, MAY 8, 1985

For each outgoing completed call that is made, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	TIME OF DAY: 9 PM To 11 PM	TIME OF DAY: 11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: FRIENDS, FAMILY	PERSON CALLED: PROFESSIONAL SERVICES	PERSON CALLED: EMERGENCY	PERSON CALLED: BUSINESS SERVICES	PERSON CALLED: OTHER	TYPE OF CALL: LOCAL	TYPE OF CALL: LONG DISTANCE
1. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
21. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
22. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
23. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
24. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
25. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
26. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
27. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
28. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
29. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
30. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
31. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
32. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

APPENDIX III

TABLE OF POINT ESTIMATE CONFIDENCE
INTERVALS FOR EXTRAPOLATION OF RESULTS TO POPULATION

APPENDIX III

TABLE OF POINT ESTIMATE CONFIDENCE INTERVALS FOR EXTRAPOLATION OF RESULTS TO POPULATION

(based on a 95% confidence interval)

Response Proportion	Sample Size			
	100	200	300	315
10% - 90%	±5.9%	±4.2%	±3.4%	±3.3%
20% - 80%	±7.8%	±5.5%	±4.5%	±4.4%
30% - 70%	±8.9%	±6.4%	±5.2%	±5.1%
40% - 60%	±9.6%	±6.7%	±5.5%	±5.4%
50% - 50%	±9.8%	±6.9%	±5.7%	±5.5%

Instructions:

To calculate the sample accuracy of each proportion reported in the study, take the sample size upon which the proportion is based and read accuracy level opposite the response proportion row under the sample size column.

Example:

The accuracy of a 50% response proportion based on a sample size of 300 is 50% ± 5.7%, which means the true population response proportion is between 44.3% and 55.7%, 19 times out of 20.

Volume

2

Ontario

Ministry of
Transportation and
Communications

SURVEY OF LOCAL TELEPHONE PRICING AND USAGE ISSUES AMONG CUSTOMERS IN ONTARIO

VOLUME 2 - SMALL BUSINESS

Prepared by

The Coopers & Lybrand Consulting Group

for

Ministry of Transportation and Communications
Ontario

February 17, 1986

ONTARIO MINISTRY OF TRANSPORTATION AND COMMUNICATIONS

SURVEY OF LOCAL TELEPHONE PRICING AND USAGE ISSUES AMONG SMALL BUSINESS CUSTOMERS IN ONTARIO

February 17, 1986

Submitted to: Ontario Ministry of Transportation and Communications

Submitted by: L. Bozinoff, Ph.D.

The Coopers & Lybrand Consulting Group

Management Consultants

SURVEY OF LOCAL TELEPHONE PRICING AND USAGE ISSUES AMONG SMALL BUSINESS CUSTOMERS

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EXECUTIVE SUMMARY

Local telephone service in Ontario has traditionally been priced on the basis of a flat rate per month. Bell Canada has proposed two significant changes to the pricing of local service. First, Bell has proposed to the CRTC that rate rebalancing be undertaken so that local rates are increased and long distance rates are decreased. Second, Bell Canada is extensively studying local measured service (LMS) which would move local rate structures away from a flat rate basis to a usage sensitive basis (similar to long distance rates). There is currently limited information on the effects of LMS and rate rebalancing within Ontario or within Canada.

The research objective of this study was to collect information from residential and small business telephone users in Ontario concerning:

- local and long distance calling patterns;
- attitudes towards local and long distance pricing issues;
- interrelationships between pricing attitudes and calling patterns; and
- interrelationships between pricing attitudes and user characteristics.

This report describes the findings regarding small business customers. A companion report contains the residential customer findings.

The data for this study were collected by a mail diary and accompanying questionnaire. The questionnaire was designed to measure telephone pricing attitudes and user characteristics. The diary was designed to

measure outgoing and incoming telephone calling patterns. Individuals were surveyed from each of the Ministry's five administrative regions, for a total of 291 respondents. The sample was drawn randomly from telephone books for a set of selected cities in each region. The cities were chosen on the basis of their representativeness of the region and the requirement that each city has Extended Area Service (EAS). Rural and suburban representation was ensured by recruiting individuals who resided in small communities adjacent to the selected cities.

There are five key findings:

- Small business respondents make an average of 29.2 local calls and 6.3 long distance calls each week, primarily to customers and suppliers.

- Most small business respondents are strongly opposed to the rate rebalancing proposal presented in this study, generally because few respondents perceive any benefits to them in rate rebalancing.

- Respondents are also opposed to either local measured service or local measured service with rate rebalancing.

- Respondents who make a high number of local calls tended to prefer flat rate service while respondents who make a low number of local calls tended to prefer local measured service.

- Respondents who make a low number of long distance calls tended to oppose the reduced long distance rates and higher local service charges under rate rebalancing while respondents who make a high number of long distance calls tended to prefer rate rebalancing.

I. INTRODUCTION

A. BACKGROUND

Local telephone service in Ontario has traditionally been priced on the basis of a flat rate per month for a given exchange size (i.e., rate group) and type of service (i.e., residence, business). Bell Canada has proposed two significant changes to the pricing of local service.

First, Bell has proposed to the CRTC that a form of rate restructuring on which Bell calls "rate rebalancing" be undertaken so that local rates are increased and long distance rates are decreased. The arguments given for rate rebalancing include:

- Local service costs are said to be greater than local service rates.
- Long distance costs are said to be less than long distance rates.
- Competitive pressures in the long distance voice communication market will drive long distance charges toward cost.

Second, Bell Canada is extensively studying local measured service (LMS) which would move local rate structures away from a flat rate basis to a usage sensitive basis (similar to long distance rates). The arguments given for local measured service include:

- the inherent fairness of making customers pay in direct proportion to their local service usage and,
- the ability of LMS to induce customers to modify their local calling patterns by shifting calls to off-peak periods, thereby reducing the required switching capacity of the local network.

In the United States, numerous studies and isolated bits of data collectively point to the probability that the introduction of rate rebalancing and local measured service will have a different impact on business than on residential customers. It is generally felt that rate rebalancing will benefit large business customers more than residential and small business customers. Studies on LMS have shown that local service usage in the business market varies significantly by type of business. However, the usefulness of this literature is limited by the lack of information on the effects of LMS and rate rebalancing within Ontario or within Canada.

B. RESEARCH OBJECTIVES

The research objective of this study was to collect information from residential and small business telephone users in Ontario concerning:

- local and long distance calling patterns;
- attitudes towards local and long distance pricing issues;
- interrelationships between pricing attitudes and calling patterns; and
- interrelationships between pricing attitudes and user characteristics.

This report describes the findings regarding small business customers. A companion report contains the residential customer findings.

II. METHODOLOGY

A. OVERVIEW

The data for this study were collected by a mail diary and accompanying questionnaire. The questionnaire was designed to

measure telephone pricing attitudes and user characteristics. The diary was designed to measure outgoing and incoming telephone calling patterns.

After reviewing the draft diary and questionnaire with Ministry of Transportation and Communications managers, both the diary and questionnaire were pretested. After reviewing the pretest results, a revised questionnaire and diary were developed (Appendix II).

Potential respondents were recruited by telephone and individuals who agreed to participate were mailed the diary and questionnaire. During the recruitment interview, individuals were asked how many telephones they had in their businesses so that one diary could be sent for each telephone set.

A quota of 210 individuals was recruited from each of the Ministry's five administrative regions, for a total of 1050 individuals. A regional quota was set in order to test for regional differences across the province in the survey results. Based on an estimated response rate of 30%, it was expected that the completed sample size would be 315 or 63 individuals in each region. This sample size (315) was chosen in order to achieve a sample accuracy of $\pm$5.5% for the aggregate result and $\pm$ 10% for regional results (based on a binominal distribution for a 50%-50% response proportion at a 95% confidence level).

The sample was drawn randomly from telephone books for a set of selected cities in each region. The cities were chosen on the basis of their representativeness of the region and the requirement that each city has Extended Area Service (EAS). Only business respondents located in communities with EAS were selected because local measured service may have the greatest impact in areas with EAS. Rural and suburban representation was ensured by recruiting

EXHIBIT 1

CITIES SAMPLED

Region	Central Cities	Adjacent Communities
Eastern	Ottawa	Rockland, Russell
	Kingston	Bath, Gananoque
Central	Metro Toronto	Maple
	Hamilton	Grimsby, Caledonia
Southwestern	London	Lambeth
	Windsor	Amherstberg, Essex
Northeastern	Sudbury	Lively, Whitefish, Chelmsford, Blezard Valley
	North Bay	Bonfield, Redbridge, Dokis
	Timmins	New Liskeard, Haileybury
Northwestern	Sault Ste. Marie	Echo Bay, Goulais
	Thunder Bay	Murillo

EXHIBIT 2

SAMPLE STRUCTURE BY TYPE OF SAMPLE

Completed Sample	291
Total Mailouts	1050
Response Rate	28%

businesses located in small communities adjacent to the selected cities. Exhibit 1, opposite, contains the list of cities from which businesses were recruited, broken down by region and type of city (i.e., central or adjacent). For the purposes of this study, a small business was any business with less than 50 employees and having five telephone lines or fewer.

Respondents were mailed the diary and questionnaire in one outer envelope which contained one dairy tor each telephone set the respondent owns. The questionnaire was enclosed in an inner envelope with instructions that the diary was to be completed before the questionnaire envelope was opened. This was done in order to avoid having the questionnaire bias the diary. The diary itself required the respondent and everyone else in the business to record all outgoing and incoming calls for their business during the week of either Thursday, May 2 to Wednesday, May 8, 1985 or Thursday, September 19 to Wednesday, September 25, 1985. For each outgoing call, the time and day of the call, length, person called and type of call (i.e., local or long distance) was recorded. For each incoming call, only the purpose of the call was recorded. All respondents received reminder telephone calls to complete and return the diary and questionnaire.

The questionnaire was answered after the diary was completed and respondents were encouraged to look at their completed diary while answering the questionnaire. This was done to ensure that respondents were fully aware of their telephone usage when they completed the questionnaire which provided respondents with the current basic local service rate in their area, excluding set rental and Touch Tone service. This was done to ensure that respondents were aware of the telephone service charges in their area as they completed the questionnaire.

EXHIBIT 3

SAMPLE STRUCTURE BY REGION

Region	
SAMPLE SIZE	291
Southwest	22%
Central	14
Eastern	22
Northeast	17
Northwest	25

EXHIBIT 4

SAMPLE STRUCTURE BY COMMUNITY SIZE

Community Size	
SAMPLE SIZE	291
Urban	63%
Rural, Small Community	37

EXHIBIT 5

NUMBER OF FULL TIME EMPLOYEES

SAMPLE SIZE	291
0	7%
1	26
2	26
3	12
4	11
5 and over	18

B. SAMPLE STRUCTURE

A total of 291 usable diaries and questionnaires was received, representing a 28% response rate (Exhibit 2, opposite previous page). Exhibit 3, opposite, provides a breakdown of the sample structure by the Ministry's administrative regions. Due to varying response rates in each region, 14% of the sample comprised respondents located in the Central region, compared with a planned 20%. Conversely, 25% of the sample came from the Northwest region. These variations were relatively minor and did not reflect major regional differences in response rates.

A breakdown of the sample structure by community size is provided in Exhibit 4 on the opposite page. The majority of respondents (63%) are located in urban or central city locations. Only 37% of the respondents in the sample are located in the rural or small communities adjacent to central cities. It must be stressed, however, that all rural and small community respondents had extended area service to the larger, adjacent communities.

C. RESPONDENT CHARACTERISTICS

The median number of full-time employees employed by the businesses surveyed was 2 employees with a range of 0 to 40 employees (Exhibit 5, opposite). This indicates that all of the businesses surveyed were small businesses. In terms of type of businesses represented in the survey, 34% were retailers, 26% were service and repair and 15% were manufacturers (Table 1, Appendix 1). Table 2, (Appendix I) presents a breakdown of businesses by main versus branch locations in the sample. The large majority of businesses (85%) were main business locations.

As noted earlier, all respondents had Extended Area Service to adjacent communities. The majority of businesses (84%) in the

EXHIBIT 6

NUMBER OF DAILY OUTGOING LOCAL CALLS

BY DAY OF WEEK

SAMPLE SIZE	270
Monday	5.3
Tuesday	5.3
Wednesday	5.3
Thursday	5.7
Friday	5.0
Saturday	1.9
Sunday	0.7
Total Week	29.2

EXHIBIT 7

NUMBER OF WEEKLY OUTGOING LOCAL CALLS

BY TIME OF DAY

SAMPLE SIZE	291
8:00 a.m.-9:00 p.m.	26.1
9:00 p.m.-11:00 a.m.	2.2
11:00 p.m.-8:00 a.m.	0.9
Total Week	29.2

sample did not have touchtone service (Table 3, Appendix I). More than two-thirds of businesses (69%) had only one telephone line.

D. SAMPLE ACCURACY

The next four sections present the key findings of the study. All results are presented on an aggregate, provincial basis without regional breakdowns. Regional analyses were undertaken, but no significant differences at a 95% confidence level were found in any of the results. Consequently, only aggregate results are presented in this report and the sample could be considered representative of the province as a whole, despite the regional quota sampling plan which was used.

In interpreting the study results, it must be stressed that the results are only accurate within a specified level of accuracy, due to sampling fluctuations. That is, had a different sample of respondents been drawn, sampling fluctuations might have yielded slightly different results. Appendix III contains the accuracy levels for binary responses (i.e., yes/no answers) for various response proportions at a 95% confidence level. Details concerning the use of this appendix are contained in the appendix itself.

III. LOCAL AND LONG DISTANCE CALLING PATTERNS

A. LOCAL CALLING PATTERNS

Small business respondents made an average of 29.2 outgoing local calls from their businesses during the week that was surveyed (Exhibit 6, opposite). The daily average number of calls was 5.3 during the week and 1.3 during the weekend.

During the week that was surveyed, respondents made most of their outgoing local calls between 8:00 a.m. to 9:00 p.m. (26.1 calls),

EXHIBIT 8

NUMBER OF WEEKLY OUTGOING LOCAL CALLS BY PERSON CALLED

Person Called	
SAMPLE SIZE	180
Customers	11.1
Friends and Relatives	5.5
Suppliers	5.5
Other Businesses	4.6
Employees	2.5
Total Week	29.2

EXHIBIT 9

NUMBER OF WEEKLY OUTGOING LONG DISTANCE CALLS BY DAY OF WEEK

SAMPLE SIZE	179
Weekdays	5.8
Weekends	0.5
Total Week	6.3

followed by 9:00 p.m. to 11:00 p.m. (2.2 calls) and 11:00 p.m. to 8:00 a.m. (0.9 calls) (Exhibit 7, opposite previous page).

Most of the weekly outgoing local calls made by business respondents were made to customers (11.1 calls), followed by calls to friends and relatives (5.5 calls), and suppliers (5.5 calls) (Exhibit 8, opposite).

B. LONG DISTANCE CALLING PATTERNS

Small business respondents made considerably fewer long distance calls than local calls during the week. On average, a total of 6.3 long distance calls were made during the week surveyed, comprised of 5.8 long distance calls made during week days and 0.5 long distance calls made during the weekend (Exhibit 9, opposite).

Unlike most local calls, most long distance calls made each week by business respondents were made to suppliers (2.6 calls) (Exhibit 10, opposite next page). Interestingly, a number of long distance calls were made to customers each week (1.7 calls).

C. INCOMING CALL PATTERNS

Small business respondents received an average of 64.3 calls during the week surveyed, indicating that businesses receive far more calls than they initiate (Table 5, Appendix 1). Of the 64.3 calls received each week, more than half of the calls were from customers (39.7 calls). This finding underlines the importance of the telephone for small businesses. Based on the findings of residential customers contained in a companion report, local measured service could have a detrimental effect on small business revenues by inhibiting customer calls.

D. SUMMARY

In terms of outgoing calling patterns, business respondents made an average of 29.2 local calls and 6.3 long distance calls each week.

EXHIBIT 10

NUMBER OF WEEKLY OUTGOING LONG DISTANCE CALLS BY PERSON CALLED

Person Called	
SAMPLE SIZE	160
Suppliers	2.6
Customers	1.7
Other Businesses	0.8
Employees	0.8
Friends and Relatives	0.4
Total Week	6.3

EXHIBIT 11

RATE RE BALANCING ATTITUDES

SAMPLE SIZE	277	
Strongly in Favour	8%	
Somewhat in Favour	14	
Somewhat Opposed	15	78
Strongly Opposed	63	

Most local calls are made to customers while most long distance calls are made to suppliers and customers. The majority of local and long distance calls are made during the week rather than on weekends.

In terms of incoming calls, business respondents received an average of 64.3 calls of which 39.7 were from customers. These findings again illustrate the importance of the telephone to small businesses.

IV. TELEPHONE PRICING ATTITUDES

A. RATE REBALANCING

Respondents were asked whether they were in favour or opposed to a rate rebalancing plan. Under this plan their existing local rates would be doubled and their long distance rates would be reduced by 50%.

The vast majority of small business respondents were either strongly opposed (63%) or somewhat opposed (15%) to rate rebalancing (Exhibit 11, opposite). These results indicate that respondents have very strong opinions concerning their opposition to the rate rebalancing plan which was presented to them.

Despite the 50% reduction in long distance rates in the rebalancing plan, very few small business respondents indicated that they would make more long distance calls. The majority of respondents (72%), indicated that they would not change the number of long distance calls which they would make (Exhibit 12, opposite next page).

The strong opposition to rate rebalancing may be due to the fact that over two-thirds (68%) of respondents indicated that they would have difficulty affording rebalanced telephone rates (Exhibit 13, opposite next page). Of these respondents, 12% indicated that they would be somewhat likely to discontinue their telephone service and

EXHIBIT 12

CHANGE IN LONG DISTANCE CALLING

DUE TO REBALANCING

SAMPLE SIZE	289
Twice as Many Calls or More	1%
A Lot More	4
Somewhat More	9
A Few More	14
No Change	72

EXHIBIT 13

AFFORDABILITY OF RATE REBALANCING

SAMPLE SIZE	224	
Very Easy to Afford	2%	
Easy to Afford	30	
Difficult to Afford	43	68
Very Difficult to Afford	25	

13% would be very likely to discontinue their service (Exhibit 14, opposite next page). It is unlikely that all of these respondents would, in fact, discontinue their service. If 30% of those who answered that they would be "somewhat likely" to discontinue service and 90% of those who said they would be "very likely" to discontinue their service, in fact do so, then 15.3% of respondents might discontinue their telephone service with this rebalancing plan.

Respondents who both indicated that they would have difficulty affording rebalanced rates and who had more than one telephone line were asked how likely they would be to discontinue one line. Of these respondents, 29% indicated that they would be very likely to discontinue one telephone line and 10% indicated that they would be somewhat likely to discontinue one telephone line. Applying the above assumptions regarding "somewhat likely" and "very likely" responses, then 29.1% of multi-line small businesses would discontinue one telephone line if this rate rebalancing plan were introduced (Table 6, Appendix 1).

B. LOCAL MEASURED SERVICE

Respondents were asked whether they would prefer a flat rate which was $5.00 per month higher than their current flat rate, or a local measured service rate with the following elements:

- Reduced monthly minimum charge equal to $3 less than their current flat rate; and
- 3¢ charge for first minute of each outgoing local call; and
- Additional minute charges of 1¢ for calls made during the business week between 8 a.m. and 9 p.m., 2/3¢ for calls made between 9 p.m. and 11 p.m. during the week, and 1/3¢ for calls made at all other times.

EXHIBIT 14

LIKELIHOOD OF DISCONTINUING SERVICE

IF RATE REBALANCING OCCURRED

SAMPLE SIZE	190[1]
Very Likely	13%
Somewhat Likely	12
Somewhat Unlikely	21
Very Unlikely	54

---

[1] Asked only of those respondents who indicated some difficulty in affording rate rebalancing.

The local measured service plan was partly based on a composite of local measured service rates and structures used in various American state jurisdictions. The time boundaries for peak and off-peak rates were obtained from a scenario presented by Bell Canada in Local Telephone Service Pricing: Is There A Better Way? ("LMS Rating Considerations", John A. Elliot, pg 53 to 59, Proceedings of a conference held in Montreal, Quebec, May 2 to May 4, 1984). These rates are not to be understood as necessarily predicted or advocated.

Despite the increased flat rate charge, most respondents (60%) still preferred the flat rate plan (Table 7, Appendix I).

In order to assess attitudes towards flat rate versus local measured service pricing in a rate rebalanced environment, respondents were also asked to indicate whether they preferred a second flat rate or a second local measured service rate. Both rates, however, allowed for a 50% reduction in long distance rates. The second flat rate was equal to twice their current flat rate plus an additional $10.00. The combined local measured service rate contained the following elements:

- Increased monthly minimum charge of twice the respondent's current flat rate less $6.00, plus
- 6¢ charge for the first minute of each outgoing local call, and
- additional minute charges of 2¢ for calls made during the business week between 8:00 a.m. and 9:00 p.m., 1 1/3¢ for calls made between 9:00 p.m. and 11 p.m. during the week and 2/3¢ for calls made at other times.

Given a choice between these two rate proposals, 35% preferred the second flat rate, 39% preferred the local measured service rate and

EXHIBIT 15

TIME SHIFTING DUE TO LMS

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	255	246
Yes, Would Shift	30%	32%
No, Wouldn't Shift	70	68

26% indicated that they would discontinue their telephone service (Table 7, Appendix I).

Respondents were asked why they preferred the flat rate plans to either the local measured service rate or the local measured service rate with rate rebalancing. The flat rate plan was preferred to the local measured service rate either because the flat rate was perceived to be less expensive (51%) or because the flat rate allowed the subscriber to know how much the telephone charges would be each month (36%) (Table 8, Appendix I). Similarly, preference for the second flat rate plan, compared to the local measured service rate with rate rebalancing, was based on a perception that the second flat rate plan was less expensive (59%) or because the subscriber would know how much the telephone charges would be each month (31%) (Table 8, Appendix I).

Preference for the local measured service plan was cross-tabulated, with preference for the local measure service with rate rebalancing plan in order to assess consistency of preferences. Among respondents who preferred local measured service with rate balancing, 72% also preferred local measured service without rate rebalancing (Table 9, Appendix I). Conversely, among respondents who preferred the second flat rate plan to local measured service with rate rebalancing, 89% preferred the first flat rate plan to local measured service without rate rebalancing. Finally, among those who indicated that they would discontinue their service if local measured service with rate rebalancing were introduced, 43% preferred the first flat rate plan.

Respondents were asked to estimate how many fewer local telephone calls they would make if either the local measured service rate or the local measured service rate with rate rebalancing were introduced and made mandatory. Under a local measured service rate, 77% indicated that they would not make any fewer calls each day

EXHIBIT 16

CHANGE IN LOCAL CALL LENGTH WITH LMS

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	276	272
A Lot Shorter	14%	20%
Somewhat Shorter	32	36
	36	56
No Change	54	44
Somewhat Longer	0	0
A Lot Longer	0	0

EXHIBIT 17

LIKELIHOOD OF RESTRICTING PERSONAL CALLS FROM PLACE OF EMPLOYMENT

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	291	264
Very likely	48%	51%
Somewhat likely	21	22
	69	73
Somewhat unlikely	12	11
Very unlikely	19	16

(Table 10, Appendix I). With a local measured service rate with rate rebalancing, the majority of respondents(64%) still indicated that they would not make any fewer local calls.

Respondents were also asked if they would shift their local calling to other time periods if the local measured service or local measured service/rate rebalancing plans were introduced. Approximately one-third of respondents indicated that they would shift the time of their local calling under either local measured service (30%) or local measured service/rate rebalancing (32%) plans (Exhibit 15, opposite previous page). Those respondents who indicated that they would switch their local calling to other time periods were asked how many calls they would switch each day. The median number of local calls which would be switched under the local measured service plan is 2.8 and under the local measured service/rate rebalancing plans is 2.9 (Table 11, Appendix I).

Respondents were also asked whether they would make shorter local calls if either local measured service or local measured service/rate rebalancing were introduced. A large number of respondents indicated that they would make shorter calls if either local measured service (46%) or local measured service/rate rebalancing (56%) were introduced (Exhibit 16, opposite).

Respondents were also asked whether they would restrict the number of personal telephone calls employees could make if either local measured service or local measured service with rate rebalancing were introduced. Most respondents indicated some likelihood that they would restrict the number of personal telephone calls made by employees under either local measured service (69%) or local measured service with rate rebalancing (73%) (Exhibit 17, opposite).

C. IMPORTANCE OF THE TELEPHONE FOR SMALL BUSINESSES

The concern respondents indicated regarding rate rebalancing and LMS reflects to a great extent, the importance of the telephone for small businesses. It was shown earlier that the largest portion of calls received by small businesses are from customers and the calls made to customers represent the largest proportion of outgoing local calls.

Two other findings reinforce the importance of the telephone for small businesses. First, the majority of respondents (58%) correctly perceived that their telephones are used most often to communicate with their customers (Table 12, Appendix 1). Second, the vast majority of respondents (81%) indicated that the telephone was very important to their business (Table 13, Appendix 1).

D. SUMMARY

There are two major findings concerning telephone pricing attitudes. First, most small business respondents are strongly opposed to the rate balancing proposal presented to them in this survey. One reason for this opposition to rate rebalancing is the perceived lack of benefits of reduced long distance charges since few respondents indicated that they would make more long distance calls if the rates were reduced. In fact, many respondents indicated that they would have difficulty affording rebalanced rates, some to the extent of discontinuing service or dropping one line.

Second, respondents are also opposed to either local measured service or local measured service with rate rebalancing for two reasons: respondents believe the flat rate is cheaper and it sets a maximum bill each month. A substantial number of respondents

indicated that they are likely to save on local calling charges by shifting their calling to cheaper time periods and making shorter calls rather than reducing the number of local calls made should LMS or LMS/rate rebalancing be introduced. A substantial number of respondents indicated they would discontinue their service, if LMS/rate rebalancing were introduced. (See Table 7, Appendix I).

V. RELATIONSHIP BETWEEN CALL PATTERNS AND TELEPHONE SERVICE PRICING ATTITUDES

Analysis was undertaken to determine whether the number of calls made by respondents were related to their attitudes concerning telephone service pricing. Significant relationships were identified by applying cross tabulation and analyses of variance techniques with a 95% confidence level.

Preference for rate rebalancing was significantly related to the number of long distance calls made by respondents. Respondents who were strongly in favour of rate rebalancing made significantly more long distance calls (8.1) each week than respondents who were strongly opposed to rate rebalancing (3.3) (Table 14, Appendix I).

Not surprisingly, the number of outgoing local calls made by respondents was related to their preference for flat rate over local measured service. Respondents who preferred flat rate made significantly more local calls each week (32.9) than respondents who preferred local measured service (24.3) (Table 15, Appendix I). However, no relationship between local calling patterns and preference for local measured service with rate rebalancing could be established (Table 16, Appendix I). However, the sample size may be insufficient to detect such a relationship in this survey.

In summary, there is a positive relationship between the number of long distance calls made by respondents and their preference for rate rebalancing. Respondents who prefer rate rebalancing make more long distance calls than those who oppose rate rebalancing.

In addition, there is a positive relationship between the number of local calls made by respondents and their preference for flat rate over local measured service. Respondents who prefer flat rate service make more local calls than those who prefer local measured service. No relationship between the number of local calls made by respondents and preference for flat rate over local measured service with rate rebalancing could be established.

VI. RELATIONSHIP BETWEEN TELEPHONE SERVICE PRICING ATTITUDES AND RESPONDENT CHARACTERISTICS

The relationships between telephone service pricing attitudes and type of businesses were examined, using cross tabulation and analyses of variance. However, no significant relationships were found, indicating the unpopularity of LMS and rate rebalancing is wide spread.

VII. SUMMARY OF KEY FINDINGS

There are six key findings. First, small business respondents make an average of 29.2 local calls and 6.3 long distance calls each week, primarily to customers and suppliers.

Second, most small business respondents are strongly opposed to the rate rebalancing proposal presented in this study, generally because few respondents perceive any benefits to them in rate rebalancing. The long distance cost savings do not exceed the increased local service costs.

Third, respondents are also opposed to either local measured service or local measured service with rate rebalancing. A number of respondents indicated that they would discontinue their service if local measured service with rate rebalancing were introduced (Table 7, Appendix I).

Fourth, respondents who make a high number of local calls prefer flat rate service to local measured service.

And fifth, respondents who make a low number of long distance calls are opposed to reduced long distance charges and increased local service rates under rate rebalancing.

APPENDIX I

SUPPLEMENTARY TABLES

TABLE 1

TYPE OF BUSINESS

SAMPLE SIZE	278
Retailers	34%
Service & Repair	26
Manufacturers	15
Other	25

TABLE 2

TYPE OF LOCATION

SAMPLE SIZE	286
Main location	85%
Branch location	15

TABLE 3

TOUCHTONE SERVICE

SAMPLE SIZE	
Have Touchtone Service	16%
Don't Have Touchtone Service	84

TABLE 4

NUMBER OF LINES

SAMPLE SIZE	277
1	69%
2	25
3	4
4	1

TABLE 5

NUMBER OF INCOMING CALLS BY TYPE OF CALL

SAMPLE SIZE	194	
Customer Inquiries	31.2	39.7
Customer Orders	8.5	
Personal	8.4	
Other employees	6.5	
Other calls	8.4	
Total Week	64.3	

TABLE 6

LIKELIHOOD OF DISCONTINUING ONE LINE
IF RATE REBALANCING OCCURRED

SAMPLE SIZE	101[1]
Very likely	29%
Somewhat likely	10
Somewhat unlikely	12
Very unlikely	49

[1] Asked only of those respondents who both indicated some difficulty affording rate rebalancing and who had more than one telephone line.

TABLE 7

LMS PREFERENCES

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	196	183
Prefer Flat Rate	60%	35%
Prefer LMS	40	NA
Prefer LMS & Rebalancing	NA	39
Discontinue Service	NA	26

NA - Not Asked

TABLE 8

REASONS FOR PREFERRING FLAT RATE

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	111	59
Flat Rate Cheaper	51%	59%
Know Amount Each Month	36	31
Both	3	3
Other	10	7

TABLE 9

RELATIONSHIP BETWEEN LMS PREFERENCE
AND LMS WITH RATE REBALANCING PREFERENCE

		LMS WITH RATE REBALANCING PREFERENCE		
		Flat Rate	LMS with Rebalancing	Discontinue Service
SAMPLE SIZE		56	60	23
LMS	Flat Rate	89%	28%	43%
Preference	LMS	11	72	57
				($p < .001$)

---

[1] Indicates that of those respondents who preferred flat rate service instead of LMS with rate rebalancing, 89% also preferred flat rate service to LMS.

TABLE 10

LOCAL CALLING REPRESSION
PER DAY WITH LMS

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	206	199
None	77%	64%
One	2	1
Two	4	6
Three	4	6
Four	1	2
Five or More	12	21
Median	0	0

TABLE 11

NUMBER OF CALLS SWITCHED
TO A CHEAPER TIME EACH DAY WITH LMS

	LMS Only	LMS and Rebalancing
SAMPLE SIZE	43[1]	48[1]
None	16%	10%
One	12	6
Two	11	23
Three	14	13
Four	7	6
Five or More	40	42
Median	2.8	2.9

[1] Asked only of those respondents who indicated some likelihood of switching calling times.

TABLE 12

WHAT BUSINESSES USE TELEPHONE FOR MOST OFTEN

SAMPLE SIZE	269
Calling customers	58%
Calling suppliers	26
Other	16

TABLE 13

IMPORTANCE OF TELEPHONE TO BUSINESSES

SAMPLE SIZE	291
Very important	81%
Somewhat important	16
Somewhat unimportant	2
Very unimportant	1

TABLE 14

RELATIONSHIP BETWEEN OUTGOING LONG DISTANCE CALLS AND RATE REBALANCING

Preference	Number of Long Distance Calls (weekly)
SAMPLE SIZE	154
Strongly in favour	8.1
Somewhat in favour	10.1
Somewhat opposed	5.0
Strongly opposed	3.3
	($p < .01$)

TABLE 15

RELATIONSHIP BETWEEN OUTGOING LOCAL CALLS AND LMS PREFERENCE

Preference	Number of Local Calls (Weekly)
SAMPLE SIZE	123
Flat Rate	32.9
LMS	24.3
	($p < .01$)

TABLE 16

RELATIONSHIP BETWEEN OUTGOING LOCAL CALLS AND LMS/RATE REBALANCING PREFERENCE

Preference	Number of Local Calls (Weekly)
SAMPLE SIZE	112
Flat Rate	34.0
LMS Rebalancing	30.5
Discontinue Service	21.5
	(N.S.)

N.S. - Not Significant at 95% confidence level. This indicates that the differences in the number of local calls among the three groups may be due to sampling flucuations.

APPENDIX II

THE QUESTIONNAIRE AND DIARY

(Example of Questionnaire and Diary
Used for Small Business Respondents Located in Bell Canada
Rate Group 7, eg., North Bay)

TELEPHONE STUDY
BUSINESS QUESTIONNAIRE

(MAY, 1985)

PLEASE COMPLETE AND RETURN TO:

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Project #: 2 0 2 1 1 9 6-11

Version #: 2 0 7 12-14

TELEPHONE STUDY

BUSINESS QUESTIONNAIRE

We have designed this questionnaire so that a minimum amount of effort on your part is required to complete it.

In some cases, you will answer by circling a number on the scale provided. In other cases, we will ask you to write in your answer.

To guide you through the questionnaire, each question is followed by its own set of instructions.

We would like you to answer a few questions about some possible changes to you business telephone rates. If you wish, you may look at your weekly record of calls when you answer these questions.

For your information, the current business local service rate in your area, excluding telephone set rental and TouchTone service charges is $22.45 per month.

A local call is a call where there is no long distance charge.

1. Would you be in favour or opposed to a doubling of your business local service telephone rate to $44.90 each month if long distance rates in general were reduced by 50%? **CIRCLE ONE NUMBER.**

Strongly in favour	1
Somewhat in favour	2
Somewhat opposed	3
Strongly opposed	4
Undecided	8

_ 15

2. If these changes took place in your business telephone rates, please indicate whether the number of long distance calls that you make each month would increase. **CIRCLE ONE NUMBER.**

Would make twice as many or more long distance calls	1
Would make a lot more long distance calls	2
Would make somewhat more long distance calls	3
Would make a few more long distance calls	4
No change in long distance calls	5
Undecided	8

_ 16

3. And, would these changes make your telephone rates easy or difficult to afford? **CIRCLE ONE NUMBER.**

Very easy to afford	1	**SKIP QUESTION 4**
Easy to afford	2	
Difficult to afford	3	
Very difficult to afford	4	
Undecided	8	

_ 17

4. If these changes took place in your business telephone rates, how likely would you be to discontinue your business telephone service? **CIRCLE ONE NUMBER.**

Very likely	1
Somewhat likely	2
Somewhat unlikely	3
Very unlikely	4
Undecided	8

_ 18

IF YOUR BUSINESS LOCATION HAS ONLY 1 LINE, SKIP QUESTION 5.

5. If these changes took place in your business telephone rates, how likely would you be to discontinue at least 1 telephone line? **CIRCLE ONE NUMBER.**

Very likely	1
Somewhat likely	2
Somewhat unlikely	3
Very unlikely	4
Undecided	8

_ 19

Your business local service telephone rate is currently based on a flat rate where you can make an unlimited number of local calls for a flat charge.

One alternative to a local flat rate is a local measured rate where there would be a minimum monthly charge of $19.45 plus a usage charge of:

For the first minute of each <u>outgoing</u> local call: 3¢

For each additional minute:

- for calls made Mon-Fri, from 8 am to 9 pm 1¢
- for calls made Mon-Fri, from 9 pm to 11 pm 2/3¢
- for calls made during all other times 1/3¢

6. If your current business local flat rate was increased by $5 to $27.45 each month, would you prefer the new higher local flat rate or the local measured rate? (Please feel free to look at your record of telephone calls when answering this question if you wish). **CIRCLE ONE NUMBER.**

Prefer new flat rate	1	
Prefer local measured rate	2	**SKIP QUESTION 7**
Undecided	8	

_ 20

7. What is the main reason for preferring the new business local flat rate instead of the local measured rate? **CIRCLE ONE NUMBER**

New local flat rate would cost your business less than the local measured rate	1
You would know how much your bill would be each month	2
Other (specify) _____	
_____	3

_ 21

8. If the local measured rate was introduced in your area and your business were charged the local measured rate, how many fewer local calls, if any, would your business make each day? **CIRCLE ONE NUMBER.**

No change	0
One	1
Two	2
Three	3
Four	4
Five or more	5
Not sure	8

_ 22

9. And, if your business were charged the local measured rate, would your business change the times when some of your local calls were made in order to save money? **CIRCLE ONE NUMBER.**

Yes	1	
No	2	**SKIP QUESTION 10**
Undecided	8	

_ 23

10. How many calls in the average day would your business switch to a cheaper time period, in order to save money? **CIRCLE ONE NUMBER.**

None	0
One	1
Two	2
Three	3
Four	4
Five or more	5
Not sure	8

_ 24

11. If your business were charged the local measured rate, would the length of your average local call change? Would it be .... **CIRCLE ONE NUMBER.**

A lot shorter	1
Somewhat shorter	2
No change	3
Somewhat longer	4
A lot longer	5
Undecided	8

_ 25

12. And, if your business were charged the local measure rate, how likely would you be to restrict the number of personal calls that employees could make from work? **CIRCLE ONE NUMBER.**

Very likely	1
Somewhat likely	2
Somewhat unlikely	3
Very unlikely	4
Undecided	8

_ 26

Another alternative to a local flat rate is a second local measured rate where there would be a minimum monthly charge of $38.90 plus a usage charge of:

For the first minute of each <u>outgoing</u> local call: 6¢

For each additional minute:

- for calls made Mon-Fri, from 8 am to 9 pm 2¢ 9 27
- for calls made Mon-Fri, from 9 pm to 11 pm 1 1/3¢ 9 28
- for calls made during all other times 2/3¢ 9 29

In addition, long distance rates in general would be reduced by 50%.

13. If your current business local flat rate was increased by $32.45 to $54.90 each month, with a 50% reduction in long distance rates, would you prefer the new higher local flat rate or this second local measured rate, or would you discontinue your telephone service? (Please feel free to look at your record of telephone calls when answering this question if you wish.) **CIRCLE ONE NUMBER.**

Prefer new flat rate	1		
Prefer local measured rate	2		
Discontinue telephone service	3	**SKIP QUESTION 14**	_ 30
Undecided	8		

14. What is the main reason for preferring the new local flat rate instead of this local measured rate? **CIRCLE ONE NUMBER.**

New local flat rate would cost your business less than the local measured rate	1	
You would know how much your bill would be each month	2	_ 31
Other (specify) _____	3	

_____

_____

15. If this local measured rate was introduced in your area and your business were charged this local measured rate, how many <u>fewer</u> local calls, if any, would your business make each day? **CIRCLE ONE NUMBER.**

No change	0
One	1
Two	2
Three	3
Four	4
Five or more	5
Not sure	8

_ 32

16. And if your business were charged this local measured rate, would your business change the times when some of your local calls were made in order to save money? **CIRCLE ONE NUMBER.**

Yes	1	
No	2	**SKIP QUESTION 17**
Undecided	8	

_ 33

17. How many calls in the average day would your business switch to a cheaper time, in order to save money? **CIRCLE ONE NUMBER.**

None	0
One	1
Two	2
Three	3
Four	4
Five or more	5
Not sure	8

_ 34

18. If your business were charged the local measured rate, how would the length of your average local call change? Would it be .... **CIRCLE ONE NUMBER.**

A lot shorter	1
Somewhat shorter	2
No change	3
Somewhat longer	4
A lot longer	5
Undecided	8

_ 35

19. And, if you business were charged the local measure rate, how likely would you be to restrict the number of personal calls that employees could make from work? **CIRCLE ONE NUMBER.**

Very likely	1
Somewhat likely	2
Somewhat unlikely	3
Very unlikely	4
Undecided	8

_ 36

9 37
9 38

20. What does your business use the telephone for most often? **PLEASE BE SPECIFIC AND PRINT YOUR ANSWER CLEARLY.**

_____ 39-40

_____

_____ 41-42

21. How important is the telephone to your business? **CIRCLE ONE NUMBER.**

Very important	1
Somewhat important	2
Somewhat unimportant	3
Very unimportant	4
Undecided	8

_ 43

Finally, a few questions to help us classify your answers along with everyone else who has taken part in the survey.

22. How many telephone sets do you have at this business location? **RECORD NUMBER.**

_____ sets _ 44

23. And, how many telephone lines do you have at this business location? **RECORD NUMBER.**

_____ lines _ 45

24. Do you have TouchTone telephone service at this location? **CIRCLE ONE NUMBER.**

Yes	1
No	2
Don't know	3

_ 46

25. About how many full-time employees are there at this business location? **RECORD NUMBER.**

_____ full-time employees 47-48

26. How many hours is your business open each week? **RECORD BELOW.**

_____ hours 49-51

27. Is this the main location of your firm or a branch location? **CIRCLE ONE NUMBER ONLY.**

Main location	1
Branch location	2

_ 52

28. What is the primary type of business you are engaged in? **CIRCLE ONE NUMBER ONLY.**

Producers, Agriculture, Mining	1
Buyers, Wholesalers, Brokers	2
Manufacturers	3
Retailers	4
Financial Institutions	5
Construction	6
Service and Repair (Photographers, Barbers, Tailors, Truck Rentals, Television Rental, etc.)	7
Professionals (Doctors, Engineers, Lawyers, etc.)	8
Transportation/Utilities	9
Insurance	10
Government	11
Other (specify) _____	12

THANK YOU VERY MUCH. PLEASE MAIL THIS QUESTIONNAIRE AND YOUR WEEKLY RECORD OF CALLS IN THE ENVELOPE PROVIDED

9	54-55
9	56
9	57
9	58-59
9	60
9	61
9	62-63
9	64-65
9	66-67
9	68-69
9	70-71
9	72-73
9	74-75
9	76-77
9	78
9	79
9	80

INSTRUCTIONS

OUTGOING CALLS

For each outgoing call that you or anyone else at this business location makes, please indicate the first three digits of the number called (not the area code) and indicate:

1. Time of day - 8 a.m. - 9 p.m., or
   9 p.m. - 11 p.m., or
   11 p.m. - 8 a.m.
2. Length of call in minutes
3. Person called - customers, potential customers, or
   suppliers, or
   other employees at another location, or
   friends, relatives, or other (i.e. none of the above)
4. Type of call - local, or
   long distance.

INCOMING CALLS

For each incoming call that you or anyone else at this business location receives, please indicate whether the purpose of the call was

1. to place an order, or
2. a customer (client inquiry), or
3. a call from other employees, or
4. a social call (i.e. friends, relatives), or
5. miscellaneous call (none of the above).

PLEASE BE SURE TO DO THIS AS EACH CALL OCCURS THROUGHOUT EACH DAY FOR THE NEXT SEVEN DAYS

If you have more than one telephone, leave one copy of this booklet beside each telephone.

Please remind everyone at this business location who uses the telephone to record their calls when they make them.

Do not record calls that are not completed, that is, if there is no answer or you get a busy signal.

Please record your main telephone number here: _____

Please record your community here: _____

INSTRUCTIONS

OUTGOING CALLS INSTRUCTIONS

USE THIS PACK FOR ALL CALLS MADE OR RECEIVED ON THURSDAY, MAY 2, 1985.

For each outgoing completed call that is made from this business location, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: CUSTOMERS, POTENTIAL CUSTOMERS	SUPPLIERS	OTHER EMPLOYEES	FRIENDS, RELATIVES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20. ___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

INCOMING CALLS INSTRUCTIONS

For each incoming call that you or anyone else at this business location receives, please indicate by a check (✓) whether the call was to place an order, a customer/client inquiry, a call to other employees, a social call or a miscellaneous call.

To place an order	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A customer/client inquiry	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A call to other employees	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A social call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A miscellaneous call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )

INSTRUCTIONS

OUTGOING CALLS INSTRUCTIONS **USE THIS PAGE FOR ALL CALLS MADE OR RECEIVED ON FRIDAY, MAY 3, 1985.**

For each outgoing completed call that is made from this business location, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY			LENGTH OF CALL	PERSON CALLED					TYPE OF CALL	
	8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	(MINUTES)	CUSTOMERS, POTENTIAL CUSTOMERS	SUPPLIERS	OTHER EMPLOYEES	FRIENDS, RELATIVES	OTHER	LOCAL	LONG DISTANCE
1.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

INCOMING CALLS INSTRUCTIONS

For each incoming call that you or anyone else at this business location receives, please indicate by a check (✓) whether the call was to place an order, a customer/client inquiry, a call to other employees, a social call or a miscellaneous call.

To place an order	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A customer/client inquiry	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A call to other employees	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A social call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A miscellaneous call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )

INSTRUCTIONS

OUTGOING CALLS INSTRUCTIONS

USE THIS PAGE FOR ALL CALLS MADE OR RECEIVED ON SATURDAY, MAY 4, 1985.

For each outgoing completed call that is made from this business location, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: CUSTOMERS, POTENTIAL CUSTOMERS	SUPPLIERS	OTHER EMPLOYEES	FRIENDS, RELATIVES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

INCOMING CALLS INSTRUCTIONS

For each incoming call that you or anyone else at this business location receives, please indicate by a check (✓) whether the call was to place an order, a customer/client inquiry, a call to other employees, a social call or a miscellaneous call.

To place an order	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A customer/client inquiry	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A call to other employees	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A social call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A miscellaneous call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )

INSTRUCTIONS

OUTGOING CALLS INSTRUCTIONS **USE THIS PAGE FOR ALL CALLS MADE OR RECEIVED ON SUNDAY, MAY 5, 1985.**

For each outgoing completed call that is made from this business location, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: CUSTOMERS, POTENTIAL CUSTOMERS	SUPPLIERS	OTHER EMPLOYEES	FRIENDS, RELATIVES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

INCOMING CALLS INSTRUCTIONS

For each incoming call that you or anyone else at this business location receives, please indicate by a check (✓) whether the call was to place an order, a customer/client inquiry, a call to other employees, a social call or a miscellaneous call.

To place an order	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A customer/client inquiry	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A call to other employees	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A social call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A miscellaneous call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )

INSTRUCTIONS

OUTGOING CALLS INSTRUCTIONS **USE THIS PAGE FOR ALL CALLS MADE OR RECEIVED ON MONDAY, MAY 6, 1985.**

For each outgoing completed call that is made from this business location, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY: 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED: CUSTOMERS, POTENTIAL CUSTOMERS	SUPPLIERS	OTHER EMPLOYEES	FRIENDS, RELATIVES	OTHER	TYPE OF CALL: LOCAL	LONG DISTANCE
1.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

INCOMING CALLS INSTRUCTIONS

For each incoming call that you or anyone else at this business location receives, please indicate by a check (✓) whether the call was to place an order, a customer/client inquiry, a call to other employees, a social call or a miscellaneous call.

To place an order	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A customer/client inquiry	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A call to other employees	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A social call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A miscellaneous call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )

INSTRUCTIONS

OUTGOING CALLS INSTRUCTIONS **USE THIS PACK FOR ALL CALLS MADE OR RECEIVED ON TUESDAY, MAY 7, 1985.**

For each outgoing completed call that is made from this business location, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY			LENGTH OF CALL	PERSON CALLED					TYPE OF CALL	
	8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	(MINUTES)	CUSTOMERS, POTENTIAL CUSTOMERS	SUPPLIERS	OTHER EMPLOYEES	FRIENDS, RELATIVES	OTHER	LOCAL	LONG DISTANCE
1.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

INCOMING CALLS INSTRUCTIONS

For each incoming call that you or anyone else at this business location receives, please indicate by a check (✓) whether the call was to place an order, a customer/client inquiry, a call to other employees, a social call or a miscellaneous call.

To place an order	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A customer/client inquiry	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A call to other employees	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A social call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A miscellaneous call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )

INSTRUCTIONS

OUTGOING CALLS INSTRUCTIONS **USE THIS PAGE FOR ALL CALLS MADE OR RECEIVED ON WEDNESDAY, MAY 8, 1985.**

For each outgoing completed call that is made from this business location, please indicate the first three digits of the number called, the length of the call in minutes and check (✓) the appropriate bracket for the time of day, person called, and type of call.

Record first three digits of number called	TIME OF DAY 8 AM To 9 PM	9 PM To 11 PM	11 PM To 8 AM	LENGTH OF CALL (MINUTES)	PERSON CALLED CUSTOMERS, POTENTIAL CUSTOMERS	SUPPLIERS	OTHER EMPLOYEES	FRIENDS, RELATIVES	OTHER	TYPE OF CALL LOCAL	LONG DISTANCE
1.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
2.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
3.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
4.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
5.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
6.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
7.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
8.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
9.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
10.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
11.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
12.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
13.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
14.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
15.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
16.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
17.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
18.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
19.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )
20.___	( )	( )	( )	_____	( )	( )	( )	( )	( )	( )	( )

INCOMING CALLS INSTRUCTIONS

For each incoming call that you or anyone else at this business location receives, please indicate by a check (✓) whether the call was to place an order, a customer/client inquiry, a call to other employees, a social call or a miscellaneous call.

To place an order	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A customer/client inquiry	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A call to other employees	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A social call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )
A miscellaneous call	( )	( )	( )	( )	( )	( )	( )	( )
	( )	( )	( )	( )	( )	( )	( )	( )

APPENDIX III

TABLE OF POINT ESTIMATE CONFIDENCE
INTERVALS FOR EXTRAPOLATION OF RESULTS TO POPULATION

APPENDIX III

TABLE OF POINT ESTIMATE CONFIDENCE INTERVALS FOR EXTRAPOLATION OF RESULTS TO POPULATION
(based on a 95% confidence interval)

RESPONSE PROPORTION	SAMPLE SIZE			
	100	200	300	315
10% - 90%	± 5.9%	± 4.2%	± 3.4%	± 3.3%
20% - 80%	± 7.8%	± 5.5%	± 4.5%	± 4.4%
30% - 70%	± 8.9%	± 6.4%	± 5.2%	± 5.1%
40% - 60%	± 9.6%	± 6.7%	± 5.5%	± 5.4%
50% - 50%	± 9.8%	± 6.9%	± 5.7%	± 5.5%

Instructions:

To calculate the sample accuracy of each proportion reported in the study, take the sample size upon which the proportion is based and read accuracy level opposite the response proportion row under the sample size column.

Example:

The accuracy of a 50% proportion based on a sample size of 300 is 50% ± 5.7%, which means the true population response proportion is between 44.3% and 55.7%, 19 times out of 20.